

REMARKS

Reconsideration of this Application is respectfully requested.

Independent Claims 1, 9, and 14 have been amended. Dependent Claims 6, 12, and 18 have been amended. Claims 1 through 20 remain pending.

Applicant asserts that the claims of the present application are patentable over the cited art.

35 USC Section 103 rejections

Paragraphs 7 and 14 of the above referenced Office Action reject independent Claims 1, 9, and 14 as being obvious in view of Schmidt (U.S. Patent No. 6,842,803) in further view of Chisholm (U.S. Patent No. 5,968,143). Applicant respectfully traverses.

Embodiments of the claimed invention implement a bypass method for disk I/O (input output) in a computer system. Independent Claims 1, 9, and 14 have been amended to recite transferring a command from the processor to the disk controller, the command causing a start up of a disk drive coupled to the disk controller, and then, subsequent to transferring the command causing the start up, preparing disk transaction information by packaging a plurality of data structures comprising the disk transaction (emphasis added). Applicant points out that the independent claims have been

amended to explicitly recite the transferring of a command to the disk controller that causes the start up of the disk drive, and that the packaging of the data structures comprising the disk transaction occurs after the start up command has been transferred. The disk controller then processes the disk transaction information to control the disk drive and implement a disk I/O. By causing the start up prior to the packaging, claimed embodiments (e.g., dependent Claims 6, 12, and 18) enable the disk controller to hide the start up latency of the disk drive (emphasis added).

Thus, each of the independent Claims 1, 9, and 14 recite transferring a command to a disk controller, wherein the command causes a start up of a disk drive coupled to the disk controller. Subsequent to this command transfer, disk transaction information is then prepared and processed by the disk controller to control the disk drive and implement a disk I/O, thereby enabling the disk controller to hide the start up latency of the disk drive. While the disk drive executes its start up routine (e.g., which can take 4 to 6 microseconds), the disk controller packages this transaction.

With regard to the Schmidt reference, Applicant maintains that Schmidt is directed towards a general computer system that executes a privileged mode driver. The cited sections Schmidt (e.g., figure 2, reference numbers 100 and 195) show a computer system and a storage device.

Schmidt column 8 lines 36 through 52 described storage device having one or more operating systems, device drivers, or their application stored therein and further recites Windows® from the Microsoft Corporation as an example. The cited section of Schmidt goes on to describe privileged levels at which device drivers typically operate. There is no further discussion of any disk start up commands, disk transaction information, the plurality of PRD (physical region descriptor) data structures, or the plurality of CPB (command parameter block) data structures for implementing the disk transaction. There is no disclosure or suggestion with regard to, subsequent to transferring the command causing the start up, preparing disk transaction information by packaging a plurality of data structures comprising the disk transaction (emphasis added).

With regard to the Chisholm reference, Applicant maintains that Chisholm describes a system whereby a transfer signal is given to a command block transfer controller to start a command block transfer without a local processor unit intervention. There is no disclosure or suggestion in Chisholm with regard to, subsequent to transferring the command causing the start up, preparing disk transaction information by packaging a plurality of data structures comprising the disk transaction as in the claimed invention (emphasis added).

There is no description within Chisholm (e.g., column 5 lines 23 through 58) of the transfer of a command to cause the startup of a disk drive coupled to the disk controller, and the subsequent implementation of a disk I/O from the disk controller. There is no description within Chisholm of the start up latency of the disk drive and the hiding of the start up latency. There is no description or disclosure within Chisholm of the benefits of issuing a command to start up a disk drive and subsequently packaging the data comprising the command for implementation of the disk drive I/O. There is no description within Chisholm of the need to hide disc start up latency. Thus, Applicant maintains the assertion that the issuance of a command to initiate a disk drive start up followed by the actual packaging and implementation of the disk drive I/O is in not obvious and is not shown or suggested by Chisholm.

Accordingly, Applicant asserts that Schmidt in combination with Chisholm does not show or suggest the claimed invention. Applicant further points out that there is no motivation to combine a host processor-local processor transfer scheme of Chisholm with a software controlled modem of Schmidt to obtain the functionality of the claimed invention. Thus, independent Claims 1, 9, and 14 are not obvious in view of the Chisholm-Schmidt combination within the meaning of 35 USC Section 103.

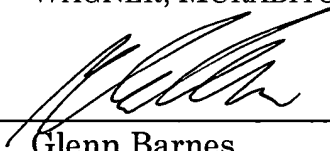
CONCLUSION

Applicant respectfully asserts that all claims (Claims 1-20) are now in condition for allowance and Applicant earnestly solicits such action from the Examiner. The Examiner is urged to contact Applicant's undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Respectfully submitted,
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